

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

- 1-6. (canceled)
7. (previously presented) A network device comprising:
 - a transfer request unit configured to generate a request to transfer data;
 - a rate limiter configured to control a rate at which data is transferred; and
 - an arbiter configured to receive the request and transfer the data at a rate determined by the rate limiter,wherein the rate limiter includes:
 - a counter configured to track an amount of time between data transfers,
 - a first register configured to store a threshold value,
 - a comparator configured to compare the amount of time to the threshold value and transmit a signal when the amount of time equals or exceeds the threshold value, and
 - a second register configured to receive the signal and clear an entry indicating that a data transfer is permitted.
8. (canceled)

9. (previously presented) The network device of claim 7 wherein the threshold value is programmable.

10. (previously presented) The network device of claim 7 wherein the threshold value is set to exceed a delay associated with a flow control signal.

11. (previously presented) The network device of claim 7 wherein the comparator compares the amount of time to the threshold value each cycle.

12. (original) The network device of claim 7 wherein the arbiter transfers the data via one of a plurality of streams.

13. (original) The network device of claim 12 wherein the rate limiter includes:

a plurality of counters, each counter associated with one of the plurality of streams and configured to store a value representing an amount of time between data transfers via the associated stream,

a first register comprising a plurality of entries, each entry corresponding to one of the plurality of streams and configured to store a threshold value,

a comparator configured to:

compare the counter values to the corresponding entries of the register, and

transfer a signal when one of the counter values equals or exceeds the threshold value of the associated entry, and

a second register comprising a plurality of entries, each entry corresponding to one of the plurality of streams and configured to receive the signal and clear a bit when the entry corresponds to the one counter value, indicating that a data transfer is permitted.

14. (original) The network device of claim 13 wherein the comparator compares at least one counter value to the associated entry of the register every cycle.

15. (original) The network device of claim 13 wherein the threshold value of each of the entries is set to exceed a delay associated with a flow control signal.

16. (original) The network device of claim 12 further comprising:
a transfer register comprising a plurality of entries, each of the entries being associated with one of the plurality of streams and configured to store a data transfer permission bit.

17. (original) The network device of claim 16 wherein the arbiter transfers data for a particular stream based on the data transfer permission bit associated with that stream.

18. (original) The network device of claim 12 wherein the plurality of streams includes 128 streams.

19-22. (canceled)

23. (currently amended) A system for preventing a buffer overflow condition, comprising:

a register comprising at least one entry configured to store a threshold value, the threshold value equaling or exceeding a delay associated with transferring a flow control signal from the buffer to a device that transmits data to the buffer, the device and the buffer being connected via 128 streams, and the register including 128 entries;

at least one counter configured to store a value representing an amount of time since a previous data transmission to the buffer, the at least one counter includes 128 counters, each of the counters being associated with one of the entries; and

a comparator configured to:

compare the amount of time to the threshold value, and

permit transmission of data to the buffer when the amount of time equals or exceeds the threshold value.

24. (canceled)

25. (canceled)

26. (currently amended) The system of claim ~~[[24]]~~ 23 wherein the counter contains 4 bits.

27. (currently amended) The system of claim ~~[[24]]~~ 23 wherein the value in the counter is reset when data is transmitted to the buffer.

28. (original) The system of claim 23 further comprising:
a second register coupled to the comparator and comprising at least one entry configured to store a bit indicating whether transmission of data is permitted.

29-38. (canceled)

39. (currently amended) A network device comprising:
a first flow control device comprising:
a transfer request unit configured to generate a request to transfer data,
a rate limiter configured to control a rate at which data is

transferred, the rate limiter including:

a counter configured to track an amount of time between
data transfers,

a first register configured to store a threshold value,

a comparator configured to compare the amount of time to
the threshold value and transmit a signal when the amount of time equals or exceeds the
threshold value, and

a second register configured to receive the signal and clear
an entry indicating that a data transfer is permitted, and

an arbiter configured to receive the request and transfer the data at
a rate determined by the rate limiter; and

a second flow control device comprising:

a throttle controller configured to:

track an amount of data read from a buffer, and

reduce a speed at which data is read from the buffer when
the amount exceeds a threshold.

40. (canceled)

41. (original) The network device of claim 39 wherein the throttle controller
includes:

a counter that tracks the amount of data, and

a mask register configured to store a value representing the speed.